

SOSNIN, I. Ya.; BERKOVICH, N. Yu.

Assortment of rough wool fabrics. Tekst. prom. 18 no.1:44-47 Ja
'58. (MIRA 11:2)

1. Zamestitel' predsedatelya Ul'yanovskogo sovnarkhoza (for Sosnin).
2. Glavnyy inzhener Upravleniya legkoy promyshlennosti (for Berkovich).

(Woolen and worsted manufacture)

SOSNIN, I.Ya.; BERKOVICH, N.Yu.; CHUKHIN, A.A.

Introducing machinery in the blending process. Tekst. prom. 18
no. 7:31-33 J1 '58. (MIRA 11:7)

1. Zamestitel' predsedatelya Ul'yanovskogo sovnarkhoza (for Sosnin).
2. Glavnyy inzhener upravleniya legkoy promyshlennosti Ul'yanovskogo sovnarkhoza (for Berkovich).
3. Glavnyy mekhanik Morshanskoy sukonnoy fabriki (for Chukhin).

(Textile machinery)

PERVISHIN, M.G.; LOGINOV, F.G.; ZHIMERIN, D.G.; PAVLENKO, A.S.;
KULEV, I.A.; DONCHENKO, V.I.; DROBYSHEV, A.I.; DMITRIYEV, I.I.;
YERMAKOV, V.S.; SOSNIN, L.A.; PODUSHKIN, A.S.; SMIRNOV, M.S.;
TARASOV, N.Ya.; NIKOL'SKIY, G.P.; KRYLOV, N.A.; KOGTEV, G.I.;
ACHKASOV, D.I.; VESELOV, N.D.; CHIZHOV, D.G.; UGORETS, I.I.;
NIKIFOROV, F.N.; PLATONOV, N.A.

Vladimir Nikolaevich Sergeev; obituary. Elek. sta. 27 no.3:63 Mr
'56. (MLRA 9:8)

(Sergeev, Vladimir Nikolaevich, 1903-1956)

SOSNIN LEONID IYANOVICH (1896-1959)*

RELEASED

SOSNIN, L.I.

[Improvement cutting of low-value stands of hardwood with the purpose of restoring oak forests in White Russia] Rubki ukhoda v malotsennykh listvennykh molodniakakh s tsel'iu vosstanovleniia dubs v BSSR. Minsk, Akademiia nauk Belorusskoi SSR, 1954, 58 p. (MIRA 11:10)

(White Russia--Oak)

* Bot Zhur 44 no 8, 1192-1195, 1959

SOSNIN, L.N., inzhener.

~~_____~~
Mechanization of sand drying and transportation. Lit. proizv. no.2:
30-31 F '57. (MLRA 10:4)

(Sand, Foundry)

KLAR, G.V.; SOSNIN, M.I.

Wood particle boards of increased strength in the direction of chip orientation. Trudy Inst. lesa i drev. 65:91-94 '63. (MIRA 16:10)

CHUPILKO, V.S.; RESHETNIKOV, V.K.; SOSNIN, M.V.

Attachment to the SKGN-6 drill for peanut planting. Trakt. i
sel'khoz mash. no.8:26-27 Ag '64. (MIRA 17:11)

1. Kubanskiy nauchno-issledovatel'skiy institut ispytaniya
traktorov i sel'skokhozyaystvennykh mashin.

SOSNIN, Mikhail Yakovlevich; BUDARINA, V., red.; LAPIDUS, L.,
mlad. red.

[Current problems of using the labor force in the U.S.S.R.]
Aktual'nye problemy ispol'zovaniia rabochei sily v SSSR.
Moskva, Izd-vo "Mysl'," 1965. 302 p. (MIRA 18:2)

SOSNIN, N.A., aspirant

Effectiveness of a mixture of 2,4-D esters in controlling the field
sow thistle. Zashch.rast.ot vred.i bol. 7 no.4:32-34 Ap '62.
(MIRA 15:12)

1. Moskovskaya ordena Lenina sel'skokhozyaystvennaya akademia
im. K.A. Timiryazeva.

(TSelinograd Province--Thistle) (2,4-D)

SOSNIN, N.A., aspirant

Economic evaluation of chemical weed control of grain crops
in the Virgin Territory. Izv.TSKHA no.4:21-33 '62. (MIRA 15:12)

(Virgin Territory—Grain) (Virgin Territory—Weed control)

SOSMIN, H.A., aspirant

Role of herbicides in the intensification of agriculture in
virgin lands [with summary in English]. Izv. TSKHA no.3:24-34
'63. (MIRA 16:9)

(Virgin Territory-- Wheat)

(Virgin Territory-- Weed control)

L 31929-86 EWT(1) RD

ACC NR: AP5028794

(A)

SOURCE CODE: UR/0354/65/000/009/0052/0053

AUTHOR: Shirshova, A. I. (Candidate of agricultural sciences); Sosnin, N. A. (Aspirant)

ORG: [Shirshova] Ural'skiy LTI; [Sosnin] KazNIIKKh

TITLE: Experiments using a growth stimulant extracted from petroleum

SOURCE: Lesnoye khozyaystvo, no. 9, 1965, 52-53

TOPIC TAGS: plant growth, plant growth stimulator, plant development

ABSTRACT: The effect of the growth stimulant on the root formation of poplar, apple, and cherry tree cuttings is described. The first part of the article describes the effect of the growth stimulant on the rooting of winter poplar cuttings. The preparation, storage and treatment of cuttings immersed in this solution and a heteroauxin solution, the subsequent planting of these cuttings and the thorough observation of their development are reported. It was concluded that cuttings treated by the growth solution extracted from petroleum developed much better and had a much higher adaptation. The root system of cuttings treated by the solution developed much better than control cuttings. A table presents data on the adaptation and growth of the winter ash cuttings under the effect of various growth stimulants. It is concluded that cuttings treated with heteroauxin solution did not differ appreciably from the control specimens in

UDC: 634.232.5/.4 : 631.8

Card 1/2

L 319/24.00

ACC NR: AP5028794

terms of growth and root formation. The second part of the article describes the experimental study of the effect of the petroleum growth stimulant on apple and cherry tree cuttings. It describes the type of soil, the method of planting, and the varieties of fruit tree cuttings used, as well as the various ratios of this growth stimulant in combination with water and its effect on fruit tree cuttings. The author concludes that the use of this growth stimulant in various ratios with water had no positive effects on the growth of cuttings in height, with the exception of the apple tree cuttings. Orig. art. has: 2 tables.

SUB CODE: 06/ SUBM DATE: none

^{mt}
Card 2/2

SEPEROVICH, I.P.; SOSNIN, N.S.; BOYEV, N.N.; red.; NIKITINA, L.V., red. izd-va,;
BACHURINA, A.M., tekhn. red.

[Field handbook for the timber estimator] Polevoi spravochnik
taksatora. Izd. 2., ispr. i dop. Moskva, Goslesbumizdat, 1958. 251 p.
(MIRA 11:12)
(Forests and forestry--Handbooks, manuals, etc.)

SOSNIN N. V.

May 49

USSR/Engineering
Steam Boilers

"Formation of Cracks in Boiler Drums as a Result of Installing Conical Plugs," L. D. Ginzburgshik, Engr., N. V. Sosnin, S.S. Yakobson, Engr., 2 pp

"Elek Stants" No 5

During assembly of one boiler with a working Pressure of 34 at, it was necessary to plug extra holes in two drums. Solid conical plugs were welded into the drums for this purpose: 19 in the upper drum and four in the lower. This led to radial cracks in the drums. Suggests that use of welded conical plugs be discontinued, and that screw caps be used instead.

PA 44/49THO

SOSNIN, N.V.; YAKOBSON, S.S.

Electric arc welding of small diameter pipes. Elek.sta. 25 no.5:31-33 My '54.
(MLRA 7:6)

(Electric welding)

SOSNIN, N.V., inzh.

Welding pins to screen tubes in boilers. Energetik 5 no.9:10-11
S '57. (MIRA 10:10)

(Boilers--Welding)

SOSNIN, O.V. (Novosibirsk)

Redistribution of stresses in a solid rotating disk at the first
stage of creep. PMTF no.2:152-156 JI-Ag 60. (MIRA 14:6)
(Disks, Rotating) (Creep of materials)

SOSNIN, O. V. Cand Tech Sci -- ^{Irregular} ~~Unsettled~~ creeping of turbine-machine disks."
Novosibirsk, 1961 (Acad Sci USSR. Siberian Department. Joint Academic
Council for Phys-Math and Tech Sci). (KL, 4-61, 200)

238

L 23343-65 EWT(m)/I/EWP(b)/ENA(d)/EWP(w)/EWP(t) EW/JD
ACCESSION NR: AR4040335 S/0124/64/000/004/V041/V042

SOURCE: Ref. zh. Mekhanika, Abs. 4V262

AUTHOR: Sosnin, O. V.

TITLE: Unstabilized creep in rotating discs β

CITED SOURCE: Sb. Polzuchest' i dlitel'n. prochnost'. Novosibirsk, Sib. otd. AN SSSR, 1963, 110-115 18 26

TOPIC TAGS: rotating disc, unstabilized creep, radius dependent temperature, series expansion solution, computer programming

TRANSLATION: The article presents a method for calculating stressed and deformed states in rotating discs of variable thickness, in cases where the disc temperature is dependent on the radius. The relationship between stress and creep flow is accepted, following the theory of strain hardening, in the form $dp = p^{-\alpha} k e^{\sigma} dt$. The author employs Tresk's condition (i.e. the theory of peak tangential stress) for transition to a plane stressed state. The differential equilibrium equation is written in permutations and is solved by expansion in series. Hence,

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disc profile, temperature expansion and elastic constants are assigned by series in the radius function. The technique can be programmed for electronic computers and can be utilized for calculating unstabilized creep in a rotating disc, as well as for transient problems of special significance in assemblies intended for short-term use. V. P. Rabinovich

SUB CODE: AS, MM

ENCL: 00

Card 2/2

L 14010-66 EWT(d)/EWT(m)/EWP(w)/EWP(j)/T/EWP(t)/EWP(b)/ETC(m)-6 IJP(c) JD/WW/
ACC NR: AP6002363 (A) EM/RM SOURCE CODE: UR/0207/65/000/006/0099/0104

AUTHOR: Sosnin, O V. (Novosibirsk)

ORG: None

TITLE: Anisotropic creep of materials

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 6, 1965, 99-104

TOPIC TAGS: aluminum alloy, creep, creep mechanism

ABSTRACT: It is demonstrated that duralumin rolled to a sheet 20 mm thick behaves as an isotropic material in an elastic and plastic region at various temperatures when the standard $\sigma-\epsilon$ diagram is plotted, but that it exhibits considerable anisotropy when its creep characteristic is being determined. N. I. Malinin (K teorii anizotropnoy polzuchesti. PMTF, 1964, no. 3) presented a brief review of the state of the art of anisotropic creep of metal and nonmetal materials, and in using the ideas developed in the plasticity theory, showed certain possibilities of describing the anisotropic creep with the application of the theoretical results to the processing of experimental data on the creep of glass-reinforced plastics. The present article extends the Malinin investigation to the case of stabilized anisotropy of flow theory type of creep. Author considers it
Card 1/2

58
59
B

2

L 14010-66
ACC NR: AP6002363

his duty to thank laboratory technician A. F. Nikitenko for technical assistance in obtaining and processing the experimental data. Orig. art. has: 3 figures and 27 formulas.

SUB CODE: 11 / SUEM DATE: 25Aug64 / ORIG REF: 004 / OTH REF: 001

Card 2/2

ALSHINBAYEV, M.R.; AMELIN, V.P.; ANDRIANOVA, O.V.; GASIYEV, Zh.;
DEGRAF, G.A.; INKARBEKOV, A.B.; KOLOMYTSEV, I.V.; KOLTUSHKIN,
I.S.; MALAKHOV, V.P.; MONASTYRSKIY, A.O.; REZNIKOV, B.N.;
SAKHAROV, I.V.; SENNIK, V.K.; SOSNIN, V.A.; SURKO, V.I.;
SURKOV, Ye.P.; SYRLYBAYEV, S.N.; USIKOV, N.V.; UCHAYEV, A.F.;
SHESTOPALOV, Ye.V.; SHERMAN, R., red.; GOROKHOV, L., tekhn.
red.

[Study manual for a machinery operator] Uchebnik-spravochnik
mekhanizatora. Alma-Ata, Kazsel'khozgiz, 1963. 326 p.
(MIRA 16:12)

1. Alma-Ata, Kazakhskiy gosudarstvennyy sel'skokhozyaystven-
nyy institut. Fakul'tet mekhanizatsii. 2. Sotrudniki fakul'-
teta mekhanizatsii Kazakhskogo gosudarstvennogo sel'sko-
khozyaystvennogo instituta (for all except Sherman, Gorokhov).
(Agricultural machinery)

REZNIKOV, B.N., kand. tekhn. nauk; BRYAZGUNOV, A.V., inzh.;
SOSNIN, V.A., kand. tekhn. nauk; YEGOROVA, V., red.
GRIGOR'YEV, A., red.
[Hand book of a repairman] Spravochnik remontnika.
Alma-Ata, Izd-vo "Kainar," 1964. 257 p. (MIRA 18:1)

SOV/137-59-5-9632

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 22 (USSR)

AUTHORS: Sosnin, V.V., Yarkho, Ye.N., Travin, O.V.

TITLE: The Effect of Slag Mixing on the Desulfurization Rate of Cast Iron

PERIODICAL: V sb.: Metallurgiya i metallovedeniye, Moscow, AS USSR, 1958, pp 11 - 15

ABSTRACT: The authors investigated the effect of slag mixing on kinetics of S transition from cast iron into slag. A graphite crucible divided into four cells contained cast iron and slag. The slag in three compartments was stirred with graphite mixers at different speeds. During the experiment cast iron samples were taken off the compartments through communicating holes. The initial cast iron contained 0.3% S with admixture of S³⁵. Cast iron samples were analyzed by S³⁵. It was established that S transition from cast iron into slag was considerably accelerated

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SOV/137-59-5-9632

The Effect of Slag Mixing on the Desulfurization Rate of Cast Iron

with higher mixing speeds at elevated temperatures. The cross section of the cast-iron slag system, obtained by the self-radiography method, proved the presence of high S concentrations ($\sim 6\%$) in the slag at the interface with the metal; this indicates the presence of an equilibrium of this portion of the slag with the cast iron. ✓

I.K.

Card 2/2

S/126/61/011/003/004/017
E073/E335

AUTHORS: Kadykova, G.N. and Sosnin, V.V.

TITLE: Cubic Texture in 0.01 - 0.05 mm Thick Transformer Steel

PERIODICAL: Fizika metallov i metallovedeniye, 1961,
Vol. 11, No. 3, pp. 382 - 387

TEXT: Although numerous papers have been published on the formation of "cubic" texture (100) [001] in the iron alloy with 3% Si, the technology of obtaining such a texture has not been described in detail. However, it is evident that to obtain such a structure it is necessary to apply vacuum smelting and annealing in dry hydrogen or a vacuum, i.e. to apply measures which enable reducing the content in the metal of such admixtures as carbon, sulphur and oxides. The authors of this paper have investigated the conditions of formation of a cubic texture in steels containing 2.5 - 4.2% Si. The steel was produced in high frequency vacuum furnaces in magnesite crucibles with heats weighing 15 and 150 kg. The chemical composition of the individual heats, in %, is given in Card 1/8

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E073/E335

Cubic Texture

Table 1 (p. 17) means "not determined"). Hot-rolled sheets were annealed in an open furnace at 95 °C for 2 hours and then cooled in air, after which they were etched, cleaned with brushes and cold-rolled as follows (heats 7-17):

- 1) 65-80% reduction with a double intermediate anneal (a - 1100 °C - 3 hrs and 950 °C - 3 hrs; b - 950 °C - 3 hrs);
- 2) reduction 55-75%, treble intermediate anneal (a - 1100 °C - 3 hrs and 960 °C - 3 hrs; b - 950 °C - 3 hrs).

The intermediate anneal was in hydrogen, cooling from the annealing temperature was always inside a container in air. The heat 237 was rolled only according to the regime 2a. Heat 97 was cold-rolled with a reduction of 55-75% but the intermediate anneal was at 1100 °C for 3 hrs and 950 °C for 3 hrs. The magnetic properties were determined ballistically on ring-shaped 0.05 mm specimens of 40 mm inner dia., weighing 15-20 g; specimens from sheet 0.01 mm thick had an internal diameter of 20 mm and a weight of 5-10 g, whereby the texture was determined on discs of 20 mm dia. Final annealing

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Cubic Texture

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was in vacuum (10^{-4} to 10^{-5} mm Hg) at 1 200 °C. The specimens were without insulation and prior to annealing they were bolted together, the individual sheets being separated by molybdenum washers and covered with a molybdenum jacket. The annealing in hydrogen was carried out in the same way, whereby the dew point was -70 °C. The magnetic properties of the investigated heats after vacuum annealing at 1 200 °C are entered in Table 2. In this, the lefthand column gives the identification of the specimens, i.e. the number of the heat and the cold-rolling conditions. The bottomrow refers to specimens annealed in H₂ at 1 250 °C and tempered in vacuo at 800 °C. It can be seen that a change in the Si content from 2.55 to 4.18% does not have an appreciable influence on the magnetic properties; the data of the magnetometric analysis do not indicate a reduction in the degree of perfection of the cubic texture on increasing the Si content, which is contrary to the findings of Littman and Wiener (Ref.5). X-ray diffraction studies were also made (by M.M. Borodkina).

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S/126/61/011/003/004/017
E073/E335

Cubic Texture

The following conclusions are arrived at: for obtaining 0.01 - 0.05 mm thick transformer sheet with cubic texture the Si content should be 2.5 - 4.2%, the Mn content 0.2-0.4% and the total carbon plus oxygen content should not exceed 0.03%. Final annealing should be at 1 200 °C in a vacuum of 10^{-4} mm Hg or in hydrogen with a dew point lower than 75 °C. Steel strip with a cubic texture has excellent magnetic properties, particularly high initial permeability (up to 4 000 gauss/Oe) and a low coercive force, up to 0.13 Oe, at a thickness of 0.05 mm and up to 0.3 Oe at a thickness of 0.01 mm. There are 2 figures, 2 tables and 9 non-Soviet references.

ASSOCIATION: Institut pretsizionnykh splavov TsNIICHM
(Institute of Precision Alloys, TsNIICHM)

SUBMITTED: September 16, 1960

Card 4/8

KADYKOVA, G.N.; SOSNIN, V.V.; BORODKINA, M.M.

Texture of a thin transformer steel strip. Sbor. trud. TSNIICHM
no.25:238-243 '62. (MIRA 15:6)
(Steel--Metallography) (Rolling (Metalwork))

S/776/62/000/025/018/025

AUTHORS: Kadykova, G.N., Sosnin, V.V.

TITLE: A new soft magnetic alloy 36KHM (36KNM) with elevated corrosion resistance.

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'kiy institut chernoy metallurgii. Sbornik trudov. no.25. Moscow, 1962. Pretsizionnyye splavy. pp. 265-267.

TEXT: The paper describes an experimental investigation intended to find an alloy which, unlike Armco iron, Si steel, and Fe-Co alloys, is suitable for operation in a humid atmosphere or in sea water. The development of the alloy 36KNM was dictated by the requirement that satisfactory corrosion resistance in sea water was to be obtained, in combination with a relatively elevated magnetic saturation, a low coercive force, an elevated electrical resistance (ER), and a ready obtainability of good magnetic properties by means of heat treatment without a magnetic field. The alloy was smelted in a high-frequency induction furnace with a magnesite crucible in melts of 35 kg. The melts were deoxidized with Mn, Si, Si-Ca, and Ni-Mg. The magnetic properties were measured by the ballistic method on rings machined (turned) from the billets. Mechanical-test specimens had an ODiam of

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A new soft magnetic alloy

S/776/62/000/025/018/025

50 mm, IDiam 40 mm, height 5 mm. The ER was determined on wire 0.25-mm diam. Pre-test heat treatment: Heating to 1,100°C, 10-hr soaking, cooling to 700° at 100°/hr, accelerated cooling in a 100°C area of the furnace. A further accelerated cooling by oil quench from 750° resulted in a deterioration of the magnetic properties. The alloy was tested for corrosion resistance in synthetic sea water. Corrosion-resistance tests were performed on the test alloy in comparison with specimens of the 2X13 (2Kh13) alloy. The tests comprised 8 hrs in air, 16 hrs in water, the cycle continuing to 1536 hrs. Comparative test data are tabulated. The soft magnetic characteristics of the 36KNM alloy comprise a relatively elevated saturation, low coercive force, and elevated corrosion resistance against sea water. The alloy can, therefore, be applied to the making of parts of electromagnetic equipment for operation at room T either in a humid atmosphere or in sea water. There are 3 tables; no figures or references.

Card 2/2

KADYKOVA,, G.N., kand.tekhn.nauk; SOSNIN, V.V., inzh.

Magnetic properties of transformer steel with cube grain-oriented structure. Elektrichestvo no.3:80-83 Mr '63. (MIRA 16:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

(Electric transformers) (Steel)

L 38297-65 EWT(m)/EWA(c)/EWP(b)/T/EWA(d)/EWP(t)/EWP(w) Pad IJP(c) JD/HW

ACCESSION NR: AP5011512

UR/0286/64/000/023/0028/0029

AUTHOR: Kadykova, G. N.; Sosnin, V. V.; Gabrielyan, D. I.

TITLE: Transformer steel. Class 18, No. 166722

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1964, 28-29

TOPIC TAGS: electric steel, magnetic steel

ABSTRACT: A transformer steel with improved magnetic properties and a cubic texture is proposed with the following composition:

Element	%
Carbon	0.02
Silicon	2.7-4.0
Manganese	0.1-0.3
Nickel	0.5-1.5
Iron	balance

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. Bardina (Central Scientific Research Institute of Ferrous Metallurgy)

Card 1/2

SOSNIN, Yu., kand.tekhn.nauk

Changing local hot-water heating over to gas fuel. Zhil.-kom.
khoz. ll no.12:21-22 D '61. (MIRA 16:11)

SOSNIN, Yu.P.

The AKKh-14 gas heating furnace. Gaz.prom.no.12:16-22 D'56.
(MIRA 10:1)

(Furnaces)

SOSNIN, YU. P. ~~Doc~~ Cand Tech Sci -- (diss) "Characteristics
of the operation of heating furnaces using gas fuel." Mos,
1957. 21 pp 22 cm. (Academy of ^{Communal} Municipal Economy in K.D.
Pamfilov), 120 copies
(KL, 21-57, 103)

-69-

SOSNIN, Yuriy Pavlovich; KNAPP K.K., red.; RACHEVSKAYA, M.I., red. izd-va;
KONYASHINA, A.D., tekhn. red.

[Gas heating and heating-cooking stoves] Gazovye otopitel'nye i
otopitel'no-varochnye pechi. Moskva, Izd-vo M-va kommun. khoz.
RSFSR, 1957. 166 p. (MIRA 11:7)

(Stoves, Gas)

SOSNIN, Yu.P.

Method for improving existing heating furnaces using gas fuel. Gas.
prom. no.2:11-17 F '57. (MLRA 10:3)
(Furnaces) (Gas as fuel)

SOSNIN, Yu., inzhener.

Remodeling heating and cooking stoves for gas use. Zhil.-kom. khoz.
7 no.1:18-21 '57. (MLRA 10:4)

1. Akadmiya kommunal'nogo khozyaystva.
(Stoves, Gas)

SOSNIN, Yu., inzhener.

Features of the draft in gas heating stoves. Zhil.-kom.khoz. 7
no.8:14-15 '57. (MIRA 10:10)

(Stoves, Gas)

SOSNIN, Yu., inzh.

Selecting efficient flue systems for gas heating stoves. Zhil.-kom.
khoz. 7 no.12:6-8 '57. (MIRA 11:12)
(Stove, Gas) (Flues)

SOSNIN, Yu. P.

~~Converting heating and combination stoves to gas in apartment
houses. Gas. prom. no. 4:26-32 Ap '58. (MIRA 11:4)~~
(Gas—Heating and cooking) (Stoves)

SOSNIN, Yu., inzh.

Calculating periodic gas heating stoves. Zhil.-kom. khoz. 8 no.3:9-11
'58. (MIRA 11:4)

1. Akademiya kommunal'nogo khozyaystva im. K.D. Pamfilova.
(Stoves, Gas)

SOSNIN, Yu., kand.tekhn. nauk

Improved method for remodeling heating and cooking stoves for gas
use. Zhil.-kom. khoz. 8 no. 8:13-15 '58. (MIRA 11:8)
(Stoves, Gas)

SOSNIN, Yu.P., kand.tekhn.nauk; MURONSKIY, S.N., kand.tekhn.nauk, nauchnyy
red.; BOITOVA, Yu.P., red.

[Combination gas-fired heating and cooking stoves] Otopitel'no-
varochnye gazovye pechi. 1959. 20 p. (Akademiia kommunal'nogo
khoziaistva. Informatsionnoe pis'mo, no.10). (MIRA 14:1)
(Stoves, Gas)

SOSNIN, Yuriy Pavlovich, kand.tekhn.nauk; VINOKUROVA, Ye.B., red.;

~~SHIRIN~~, A.A., tekhn.red.

[Converting heating and cooking stoves from solid fuel to
gas] Perevod otopitel'no-varochnykh pechei s tverdogo topliva
na gaz. Moskva, Izd-vo M-va kommun.,hoz.RSFSR, 1959. 154 p.
(MIRA 12:12)

(Stoves)

SOSNIN, Yu., kand.tekhn.nauk

Adjusting some types of household ovens for gas use. Zhil.-
kom.khoz. 9 no.2:17-18 '59. (MIRA 12:5)
(Stoves, Gas)

SOSNIN, Yuriy Pavlovich, kand. tekhn. nauk; KNAPP, K.K., red.; CHEKRYZHOV,
V.A., red. izd-va; NAZAROVA, A.S., tekhn. red.

[Gas heating and heating-cooking stoves] Gazovye otopitel'nye
i otopitel'no-varochnye pechi. Izd. 2., dop. i perer. Moskva,
Izd-vo M-va kommun. khoz. RSFSR, 1960. 267 p.

(MIRA 14:4)

(Stoves, Gas)

SOSNIN, Yu.P.

Common flue system for gas installations in houses. Gaz.
prom. 5 no.7:31-40 '60. (MIRA 13:7)
(Gas distribution) (Chimneys)

SOSNIN, Yu., kand.tekhn.nauk

Installing gas appliances in apartments without separate kitchen
areas. Zhil.-kom.khoz. 10 no.2:9-10 '60. (MIRA 13:5)
(Gas appliances)

KOVALEVSKIY, I.I., kand. tekhn. nauk; prinyali uchastiye: MERINOV, N.A., inzh.; LEVIN, V.B., inzh.; SENINA, R.V., tekhnik; LERNER, B.N., kand. tekhn. nauk; PRAVOVEROV, K.N., kand. tekhn. nauk; SOSNIN, Yu.P., kand. tekhn. nauk, red.; NINEMYAGI, D.K., red. izd-va; OSENKO, L.M., tekhn. red.

[Album of heating furnaces and stoves] Al'bom otopitel'nykh i by-tovykh pechei. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam. Pt.1. [Heating furnaces] Pechi otopitel'nye. (MIRA 14:6)
1961. 85 p.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut po stroitel'stvu, Rostov-on-Don. 2. Laboratoriya otopitel'nykh pechey i ochagov nauchno-issledovatel'skogo instituta sanitarnoy tekhniki Akademii stroitel'stva i arkhitektury SSSR (for Merinov, Levin, Senina). 3. Laboratoriya otopleniya i venti-lyatsii Instituta po stroitel'stvu Akademii stroitel'stva i arkhitektury SSSR (Rostov-na-Donu) (for Kovalevskiy). 4. Akademiya kommunal'nogo khozyaystva RSFSR imeni K.D.Pamfilova (for Lerner, Pravoverov)
(Furnaces, Heating)

MUROMSKIY, S.N.; SOSNIN, Yu.P.; TYCHKOV, I.N.; KHMEL'NITSKIY, S.A.

Gas contact water heaters and prospects for their use. Sbor.
nauch. rab. AKKH no.9:3-17 '61. (MIRA 16:1)
(Water heaters)

KUTNIK, S.Ye.; SOSNIN, Yu.P.; TIKHONOV, B.S.

Improved electromagnetic valve. Gaz.prom. 6 no.7:16-17 '61.
(MIRA 17:2)

SOSNIN, YU.P.

Method of the change-over of heating furnaces to gas according to
their external dimensions. ~~Gas~~, prom. 6 no.3:15-21 '61. (MIRA 14:3)

(Furnace, Heating) (Gas, Natural)

SOSNIN, Yu.P.

Problems arising in the theory of water heating on direct
contact with the high-temperature products of gas combustion;
a topic for discussion. Gaz. prom. 7 no.3:17-25 '62.
(MIRA 17:8)

SOSNIN, Yu., kand.tekhn.nauk

New types of water heaters. Zhil.-kom.khoz. 12 no.6:13 Je '62.
(MIRA 15:12)

(Water heaters)

SOSNIN, Yuriy Pavlovich; ZAROVNYY, P.B., red.; KORNEVA, G.V.,
red. izd-va; KHENOKH, F.M., tekhn. red.

[Converting a local heating system to gas fuel] Perevod
mestnogo otopleniia na gazovoe toplivo; posobie dlia
pechnikov i tekhnikov domoupravlenii. Moskva, Izd-vo
M-va kommun.khoz.RSFSR, 1963. 159 p. (MIRA 16:12)
(Gas heating)

KOVALEVSKIY, Ivan Ivanovich, kand. tekhn.nauk; Primal uchastiye
SOSNIN, Yu.P., kand. tekhn. nauk; MAKSIMOVA, Yu.M., red.;
BARANOVA, N.N., tekhn. red.

[Stove work] Pechnye raboty. Izd.4., perer. i dop. Mo-
skva, Proftekhizdat, 1963. 237 p. (MIRA 16:7)
(Stoves)

SOSNIN, Yu.P.

Gas-fired water heater of a surface-contact type for heating and
hot water supply. Gaz.prom. no. 5:21-27 '63. (MIRA 16:6)
(Water heaters) (Hot-water heating)

SOSNIN, Yu.P.

Firing for gas contact-surface water heaters. Gaz. delo no. 3:
36-42 '64. (MIRA 17:5)

1. Akademiya komunal'nogo khozyaystva im. K.D.Pamfilova.

IVANOV, Ivan Tikhonovich, kand. tekhn. nauk; POLYAKOV, Yevgeniy
Vladimirovich, dots., kand. tekhn. nauk; DUMASHOV,
Yurly Fedorovich, inzh.; ARIYEVICH, Eliozar Moiseyevich
kand. tekhn. nauk; KOLODEY, Anton Pavlovich, inzh.;
SOSNIN, uriy Pavlovich, kand. tekhn. nauk; SMIRNOV, L.V.,
red.

[Manual on the technical maintenance of apartment houses]
Rukovodstvo po tekhnicheskoi ekspluatatsii zhilykh zdaniy.
[By] I.T.Ivanov i dr. Moskva, Stroiizdat. Pt.1. 1964.
261 p. (MIRA 13:2)

SOSNIN, Yu.P.

Methods for developing designs for gas contact water heaters. Nauch.
trudy AKKH no.23:3-17 '63. (MIRA 17:12)

DYKHNO, A.M., professor; SOSNINA, A.I.

Transverse incisions of the abdominal wall in gastric surgery.
Vest.khir. 74 no.2:34-38 Mr '54. (MLRA 7:4)

1. Iz gospital'noy khirurgicheskoy kliniki (zaveduyushchiy - professor
A.M. Dykhno) Krasnoyarskogo meditsinskogo instituta.
(Stomach--Surgery) (Abdomen--Surgery)

LUKIN, A.M.; CHERNAYA, L.S.; ~~PETROVA, G.S.~~; SOSNINA, A.I.

Extraction determination of lead by means of arsenazo.
Zav.lab. 28 no.4:398-401 '62. (MIRA 15:5)
(Lead--Analysis)

~~SOSNINA~~ A.M.; KRUKOVSKAYA, Ye.N.

Some peculiarities of the clinical and roentgenological course of
pneumonia in small children. *Pediatrics* 39 no.1:79 Ja-P '56.
(PNEUMONIA) (MIRA 10:1)
(LUNGS--RADIOGRAPHY)

PROCESSES AND PROPERTIES INDEX

ca

The sulfur compounds in Shorsu crude oil. M. A. Kazarmovskaya and A. S. Sosnina. O. N. T. I. Gorno-Geol.-Neflyanoe Inst., *Crude Oils, Bitumens and Gases from Non-Caucasian Deposits* 1934, 202-9. Shorsu crude oil has a sp. gr. of 0.9064, pour point -23°, excise resins 46, S (bomb) 1.95% and acids (in mg. KOH) 0.330. It contains 21% H₂O (the S was detd. after the sepn. of H₂O). The gasoline and kerosene fractions (b. 200-200°) contained, resp., H₂S 0.072 and 0.055, disulfides S 0.062 and 0.035, mercaptans 0.020 and 0.040, thiophenes 0.036 and 0.016, sulfides 0.068 and 0.037, thiophenes traces, residual S 0.113 and 0.444 and total S (lamp method) 0.351 and 0.627%. This oil contains some complicated S compds. which are decomposed into elementary S, H₂S, mercaptans and other secondary S compds. during the distn. H₂S is the main product of secondary origin; it separates when the crude oil is heated to 250° and constitutes about 30% of S present in the crude oil. No Se compds. were found. In a preliminary heating of the crude oil up to 250° the emulsion can be broken, leaving 2.5% of H₂O in the oil, partial desulfurization can be effected, and the gasoline can be distd. The light fractions can be partially desulfurized by the usual H₂SO₄ treatment, followed by washing. Up to 70% of the S is found in the stripped crude oil after it has been heated to 250-60°.

yy

A. A. Bochtinsk

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

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CROSS-REFERENCES INDEX

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

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Ca

The nature of the sulfur compounds of the Ural (Perm) crude oil and its desulfurization. S. S. Nametkin and A. S. Sejnina. *J. Applied Chem.* (U. S. S. R.) 7, 123 (1934).—By treatment of the kerosene distillate from the Perm crude oil with HNO₃ (d. 1.2) at room temp. with agitation, the S content was lowered from 2.0-2.8% to 0.22-0.24%. Most of the S compds. in this kerosene consist of thiophenes, although H₂S, S, mercaptans and probably disulfides also are present. A. A. Bochtlinck

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

COMMON PARALLEL INDEX

1ST AND 2ND ORDERS

GROUP

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS

SOSNINA, A. S. Cand. Chem. Sci.

Dissertation: "Sulfurous Compounds of Ishimbay Petroleum." Inst of
Mineral Fuels, Acad Sci USSR, 27 Mar 47.

SO: Vechernyaya Moskva, Mar, 1947 (Project #17836)

USSR/Petroleum
Processing
Mercaptans

Oct 48

Mercaptans from Ishimbay Oil," Acad S. S. Nemetkin
A. B. Sosnina, 4 pp

"Dok Ak Nauk SSSR" Vol LXIII, No 6

60/49196
After a comparison of various methods of isolating sulfur compounds, mercaptans from the fraction boiling between 120° at 760 mm and 125° at 50 mm were removed by treatment with mercuric chloride. This was followed by extraction with ether, fractional extraction with alcohol, treatment with steam, and decomposition of the complexes with hydrochloric acid.

60/49196

USSR/Petroleum (Contd)

Oct 48

acid. Secondary butyl mercaptan, primary normal amyl mercaptan, isoamyl mercaptan, and hexyl mercaptan were isolated. Submitted 24 Jul 48.

60/49196

YOSHIDA, A.S.

SOSNINA, A. S.

PA 45/40T101

USSR/Petroleum Products
Sulfides

Dec 48

"Sulfides From Ishimbay Petroleum," Acad S. S.
Nametkin, A. S. Sosnina, A. S. Sosnina, 4 pp

"Dok Ak Nauk SSSR" Vol LXIII, No 4

When Ishimbay petroleum with a boiling point above
140° is treated with an aqueous solution of
corrosive sublimate, aliphatic and cyclic sulfides
are obtained. Briefly describes: $C_3H_7SC_3H_7$,
 $C_6H_{12}S$, $C_7H_{14}S$, and $C_8H_{16}S$. Submitted 13 Oct 48.

45/49T101

SOSNINA, A. S.

Sulfur compounds in the Ishimbal petroleum. S. S. Nametkin and A. S. Sosnina. *Trudy Inst. Nefti, Akad. Nauk S.S.S.R.*, No. 2, 172-81(1950); cf. *C.A.* 43, 2750f; 44, 11072f. —An accurate method for extg. S compds. from petroleum fractions by means of $HgCl_2$ was developed, characterized by fractional extn. of the mercurates and simultaneous decompn. The method gives low treating losses and yields a product of very high purity. Qual. reactions with a series of narrow petroleum fractions from Ishimbal showed complete absence of thiophanes, but mercaptans, aliphatic sulfides, and cyclic sulfides were found to be present. The S compds. in the fractions boiling up to 140° at 1 atm. pressure are mainly mercaptans and aliphatic sulfides. The fractions boiling higher than 140° contain cyclic sulfides. The following individual S compds. were extd. and identified: isoamyl mercaptan, hexyl mercaptan, hexylthiophane, and heptylthiophane with small admixts. of aliphatic and cyclic sulfides. *sec*-Bu mercaptan, amyl mercaptan, dimethyltetramethylene sulfide, and dipropyl sulfide were isolated as pure compds.

H. G. Voelker

gnd

SOSNINA, A. S.

4

1-11/1
4E4J-1 } 2

The application of chromatographic adsorption analysis to the study of sulfur compounds in the Tulumazin Devonian oil. A. S. Sosnina. *Trudy Inst. Nefti. Akad. Nauk S.S.S.R.* 8, 68-70 (1956). By chromatographic adsorption sulfides can be completely sepl. from the paraffin and naphthene hydrocarbons in kerosine from Tulumazin Devonian crude oil. A high proportion of aromatic sulfides was concd. in the higher-boiling fractions, which may prove important in subsequent studies of S compds. Single-ring aromatic S compds. are concd. in the very highest-boiling fractions.

W. M. Sternberg
RM gmb/1
MT

SOSNINA, A. S.
AUTHORS: Gurovich, Ye. and Sosnina, A. S. (Moscow). 24-4-32/34
TITLE: Corrosion in sea water of steel coated with petroleum bitumen films. (Korroziya stali, pokrytoy plenkami iz neftyanykh bitumov v morskoy bode).
PERIODICAL: "Izv. Ak. Nauk, Otd. Tekh. Nauk" (Bulletin of the Ac. Sc., Technical Sciences Section), 1957, No.4, pp.172-173 (USSR).
ABSTRACT: Certain results are described of tests of bitumen coatings obtained during de-asphalting of petroleum residues. These bitumens are obtained at relatively low temperatures, they are not subject to oxidation and contain asphatenes and tar which change less than bitumens obtained by oxidation. The tests were carried out for specimens which were fully submerged or partly submerged in the electrolyte (water of the Caspian Sea) and for specimens suspended in the air above the surface of the solution. The characteristics of the used bitumens are detailed in Table 1, p.172. The results, which are enumerated in Table 2, show that the maximum loss of weight of the specimens occurred in the case of half-submersion - at the boundary of the two phases, air-liquid; the losses were smallest for the specimens which were entirely inside the gaseous phase. In the case of full submersion the best protection was obtained by films of cracking residue bitumen dissolved

Card 1/2

SOSNINA, G.K.

Significance of the protein-tuberculin test in the diagnosis of silicotuberculosis. Trudy TSIU 78:55-62 '65. (MIRA 18:9)

1. Kafedra professional'nykh zabolevaniy (zav.- prof. A.M. Rashevskaya) Tsentral'nogo instituta usovershenstvovaniya vrachey.

SOSNINA, F.M.

U S S R .

The effect of thiocyanates upon blood cholesterol in hypertension. F. I. Litvak and I. M. Sosnina (Med. Inst., Yaroslavl). *Terap. Arkh.* 26 (1954).—An NH₄SCN level of 4-6 mg./100 cc. serum very often caused a drop in blood cholesterol. This level is reached by daily administration of 0.3 g. of thiocyanate. In the sclerotic phase of hypertension thiocyanate caused hypercholesteremia. In other forms it was possible to lower cholesterol with smaller doses of thiocyanate. Higher doses were not only toxic but raised the cholesterol level at the same time. On the whole, administration of thiocyanates is beneficial, both cholesterol and blood pressure being lowered. This is especially true of the so-called labile phases of hypertension.
A. Mirkin.

TUROVA-POLYAK, M.B.; SOSNINA, I.Ye.; TRESHCHOVA, Ye.G.

Isomerization of polymethylene hydrocarbons under the influence of aluminum.
Part 18. Isomerization of dicyclopentyl. *Zhur.ob.khim.* 23 no.7:1111-1116
Jl '53. (MLRA 6:7)

1. Kafedra organicheskogo kataliza Moskovskogo Gosudarstvennogo universiteta.
(Isomerism) (Cyclopentyl)

SOSNINA, I. Ye.

TUROVA-POLYAK, M.B.; SOSNINA, I.Ye.; YUDKINA, T.P.

Isomerization of polymethyl hydrocarbons under the effect of aluminum chloride. Part 20: Isomerization of spiro-(4,5)-decane. Zhur. ob. khim. 27 no.3:586-589 Mr '57. (MIRA 10:6)

1. Moskovskiy gosudarstvennyy universitet.
(Spirodecane) (Naphthalene) (Isomerization)

SOSNINA, I.Ye.; SLOVOKHOTOVA, T.A.; YUDKINA, T.P.

Synthesis of bicyclopentylmethane. Vest.Mosk.un. Ser.mat.,mekh.astron.,
fiz.,khim. 13 no.5:145-149 '58. (MIRA 12:4)

1. Kafedra organicheskogo kataliza Moskovskogo gosudarstvennogo
universiteta.

(Methane)

SOSNINA, I. Ye. Cand Chem Sci -- (diss) "Isomerization of cyclons under the effect of aluminum chloride." Mos, 1959. 10 pp (Mos State Univ im M. V. Lomonosov. Chem Faculty), ■ 150 copies (KL, 47-59, 113)

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BALENKOVA, Ye.S.; SOSNINA, I.Ye.; TUROVA-POLYAK, M.B.; KHROMOV, S.I.

Studying the effect of aluminum chloride on cyclodecane;
brief report. Vest.Mosk.un.Ser.mat., mekh., astron., fiz., khim.
14 no.3:203-204 '59. (MIRA 13:5)

1. Kafedra organicheskogo kataliza Moskovskogo gosudar-
stvennogo universiteta.
(Aluminum chloride) (Cyclodecane)

AUTHORS: Turova-Polyak, M. B., ~~Sohnina, I. Ye.~~ SOV/79-29-1-22/74
Voznesenskaya, I. I., Yudkina, T. P.

TITLE: Isomerization of the Polymethylene Hydrocarbons Under the
Influence of Aluminum Chloride (Izomerizatsiya polimetilenovykh
uglevodorodov pod vliyaniyem khloristogo alyuminiya)
XXII. Isomerization of the Dicyclopentyl Methane (XXII. Izo-
merizatsiya ditsiklopentilmetana)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 97-101 (USSR)

ABSTRACT: In this paper the behavior of dicyclopentyl methane (a hydro-
carbon which may belong to the constituents of the petroleum
fraction of mineral oil, as far as its constants are concerned)
was investigated on its reaction with $AlCl_3$ and the influence
was clarified that is exerted by the methylene group which
separates the two five-membered rings, upon the direction of
isomerization. On the basis of the experimental results of the
present paper it may be regarded as being proved that dicyclo-
pentyl methane, like dicyclopentyl, is subjected to skeleton
isomerization under the influence of aluminum chloride and is
transformed into the trans- β -methyl decahydro naphthalene.

Card 1/2

Isomerization of the Polymethylene Hydrocarbons Under SOV/79-29-1-22/74
the Influence of Aluminum Chloride.

XXII. Isomerization of the Dicyclopentyl Methane

At 23-27° isomerization takes place in a 96-98 % yield, at 0° in a smaller yield and at -5° there is no isomerization any longer. The presence of β -methyl decahydronaphthalene was found by catalytic dehydrogenation and confirmed spectroscopically. On the dehydrogenation the β -methyl naphthalene was separated and identified as picrate. According to the results obtained it is proved that the methylene group which is situated between the two rings in dicyclopentyl methane does not appreciably influence the direction of isomerization. An attempt was made to establish the isomerization mechanism of dicyclopentyl methane into the trans- β -methyl decahydronaphthalene (see both schemes). There are 1 table and 14 references, 9 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: November 21, 1957

Card 2/2

5(3)

AUTHORS:

SOV/79-29-4-7/77

Turova-Polyak, M. B., Sosnina, I. Ye., Golutvina, I. G.,
Yudkina, T. P.

TITLE:

Isomerization of Polymethylene Hydrocarbons Under the Influence of Aluminum Chloride (Izomerizatsiya polimetilenovykh uglevodorodov pod vliyaniyem khloristogo alyuminiya). XXIII. Isomerization of 2-Methyl-bicyclo-(1,2,2)-heptane (XXIII. Izomerizatsiya 2-metil-bitsiklo-(1,2,2)-geptana)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 4, pp 1078-1083 (USSR)

ABSTRACT:

Apart from the paper by P. R. Schlever (Ref 1), the contact transformations of bicyclic bridge hydrocarbons in the presence of $AlCl_3$ have so far not been dealt with. As the basis of many natural products the skeleton of bicyclo-(1,2,2)-heptane is of great interest. 2-methyl-bicyclo-(1,2,2)-heptane is obtained by condensation of cyclopentadiene with acrolein and by hydrogenation of 2-methyl-bicyclo-(1,2,2)-heptene-5 in the presence of the skeleton-nickel catalyst. Theoretically two endo- and exo-isomers are possible for this heptane which, however, could hitherto not be separated (Scheme 1). Such configurations of the spatial arrangement of hydrocarbons were observed by Schlever

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SOV/79-29-4-7/77

Isomerization of Polymethylene Hydrocarbons Under the Influence of Aluminum Chloride. XXIII. Isomerization of 2-Methyl-bicyclo-(1,2,2)-heptane

(Ref 1). The authors found that 2-methyl-bicyclo-(1,2,2)-heptane practically completely isomerizes to bicyclo-(1,2,3)-octane by reaction with AlCl_3 at 75° , i.e. to a system consisting of five- and six-membered rings on the basis of a seven-membered ring. At 100° this reaction is accompanied by the formation of condensation products. At $21-28^\circ$ a transition from one steric configuration of 2-methyl-bicyclo-(1,2,2)-heptane into the other takes place which was proved by spectrum analysis and the physical constants. On the strength of the results obtained it may be concluded that the part of the molecule of the above heptane which corresponds to methyl cyclopentane reacts in the presence of AlCl_3 in the same way as in isolated state, i.e. it expands to a six-membered ring. On the hydrogenolysis of bicyclo-(1,2,3)-octane the m-xylene is formed. There are 1 figure, 3 tables, and 15 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)
SUBMITTED: February 11, 1958
Card 2/2

TUROVA-POLYAK, M.B.; BALENKOVA, Ye.S.; SOSNINA, I.Ye.; KHROMOV, S.I.;
YUDKINA, T.P.

Isomerization of polymethylene hydrocarbons under the effect of
aluminum chloride. Part 24: Isomerization of cyclononane and
cyclodecane. Zhur.ob.khim. 31 no.6:1976-1981 Je '61. (MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Cyclodecane) (Cyclononane) (Isomerization)

TUROVA-POLYAK, M.B.; SOSNINA, I.Ye.; YUDKINA, T.P.

Isomerization of polymethylene hydrocarbons under the effect of
aluminum chloride. Part 25: Isomerization of cyclopentylcycloheptane.
Zhur.ob.khim. 31 no.10:3187-3190 0 '61. (MIRA 14:10)

1. Moskovskiy gosudarstvennyy universitet.
(Cycloheptane)

28290

S/076/61/035/010/009/015
B106/B101

11.1210

11.0132

AUTHORS:

Kozina, M. P., Skuratov, S. M., Shtekher, S. M., Sosnina, I. Ye., and Turova-Polyak, M. B.

TITLE:

Combustion heats of some bicyclanes

PERIODICAL:

Zhurnal fizicheskoy khimii, v. 35, no. 10, 1961, 2316-2321

TEXT: The authors determined the combustion heats of some bicyclic hydrocarbons with rings of 5, 6, and 7 members at 25°C. Only one series of publications exist on this subject which did not indicate either the measuring methods applied or the dependability of the results obtained (Ref. 3: (a) J. A. Goodman a. P. H. Wise, J. Amer. Chem. Soc., 73, 850, 1951; (b) K. T. Serijan a. P. H. Wise, J. Amer. Chem. Soc., 73, 4766, 5191; 74, 365, 1952; (c), (d) see below). The following hydrocarbons were examined: dicyclopentyl, dicyclopentyl methane, cyclopentyl cyclohexane, cyclopentyl cycloheptane, dicycloheptyl, trans-β-methyl decalin. The hydrocarbons were purified chromatographically on silica gel of the type KCM(KSM), then subjected to fractional vacuum distillation and finally subjected to chromatography on silica gel for another 2 or 3 times. Their

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Combustion heats of some ...

purity was determined by a cryoscopic method developed by A. G. Anikin, Ya. I. Gerasimov, and G. M. Dugacheva (Ref. 8: Dokl. AN SSSR, 110, 576, 1950). The calorimetric bomb used (Fig. 2) was designed by the thermo-khimicheskaya laboratoriya MGU (Thermochemical Laboratory of Moscow State University), and had the following advantages as compared to other types of bombs: lower thermal inertness, simple and dependable valve construction for introducing and removing the gases, and insulated ignition wires resistant to the flame of the burning substance. The bomb was filled with oxygen free from combustion impurities to a pressure of 30 atm. Temperature of the calorimeter was measured by a specially designed thermometer allowing readings of an accuracy of 0.0002°C. Correction for the heat exchange was calculated according to the formula by Regnault-Pfaundler-Usov, and did not exceed 1% of the temperature ascent. The caloric value of the calorimeter system was determined by burning benzoic acid produced by the Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D. I. Mendeleyeva (All-Union Scientific Research Institute of Metrology imeni D. I. Mendeleev). The weight of the burned substance was found by determining the quantity of carbon dioxide produced by combustion. Carbon dioxide was absorbed by ascarite and its quantity determined by weighing

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Combustion heats of some ...

the absorption vessel. Accuracy of this method of CO₂ determination was $\pm 0.02\%$. Table 4 shows the results of determinations. By comparing the data obtained with the known values for the combustion heat of the corresponding monocyclanes (Ref. 13: S.J. Kaarsemaker a. J. Coops, Rec. trav. chim., 71, 261, 1952) and of trans-decalin (Ref. 14: G. F. Davies a. E. C. Gilbert, J. Amer. Chem. Soc., 63, 1585, 1941) the following relations could be established: combustion heat of any bicyclane consisting of rings with more than 4 carbon atoms:

$\Delta H_{\text{comb}}^{25} = \Delta H' + \Delta H'' + 60.1 \text{ kcal/mole}$ ($\Delta H'$, $\Delta H''$ = combustion heats of monocyclanes constituting the corresponding bicyclane; 60.1 kcal/mole = reaction enthalpy for forming a molecule of bicyclane and a molecule of hydrogen from 2 molecules of the corresponding monocyclanes); combustion heats of trans- β -alkyl decalins (for nonramified alkyl radicals):

$\Delta H_{\text{comb}}^{25} = 1500.3 + 154.2 + (n-1) \cdot 156.2 \text{ kcal/mole}$ (1500.3 = combustion heat of trans-decalin; 154.2 = increment of the CH₂ group directly bound to the ring; 156.2 = increment for a CH₂ group in the nonramified alkyl radical;

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Combustion heats of some ...

n = number of carbon atoms in the alkyl radical); combustion heats of bicyclanes separated by a methylene group, i.e., compounds of the type $X^1-CH_2-Y^1$ (X^1, Y^1 = radicals of the corresponding monocyclanes):

$-\Delta H_{comb}^{25} = (\Delta H_X + \Delta H_Y) - 60.1 + 155.3$ kcal/mole ($\Delta H_X, \Delta H_Y$ = combustion heats of the corresponding monocyclanes; 155.3 = increment of the CH_2

group bound to two rings); isomerization enthalpies for the liquid state at 25°C: dicyclopentyl to trans-decalin ($\Delta H_{is}^l = -13.2$ kcal/mole);

cyclopentyl cyclohexane to trans- β -methyl decalin ($\Delta H_{is}^l = 8.2$ kcal/mole);

dicyclopentyl methane to trans- β -methyl decalin ($\Delta H_{is}^l = -14.2$ kcal/mole).

There are 2 figures, 4 tables, and 15 references: 6 Soviet and 9 non-Soviet-bloc. The three most recent references to English-language publications read as follows: J. B. Greenshields a. F. D. Rossini, J. Res. Nat. Bur. Standards, 62, 271, 1958; Ref. 3: (c) R. M. Caves, R. L. McLanghlin a. P. H. Wise, J. Amer. Chem. Soc., 76, 522, 1954; (d) J. H. Lamneck, jr, a. P. H. Wise, J. Amer. Soc., 76, 5108, 1954.

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SOSNINA, I.Ye.; TUROVA-POLYAK, M.B.

Action of aluminum chloride on bicyclo (2,2,1) heptane. Part 26.
Zhur.ob.khim. 32 no.6:1941-1942 Je '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Aluminum chloride) (Norbornane)

CHUROVA-POLYAK, M.B.; SOSEINA, I.Ye.; BOLTUNOVA, L.D.

Isomerization of polymethylene hydrocarbons under the effect of aluminum chloride. Part 27: Isomerization of α -methyldecahydronaphthalene.
Zhur.ob.khim. 32 no.6:1942-1945 Je '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Naphthalene) (Aluminum chloride) (Isomerization)

KOZINA, M.P.; MIRZAYEVA, A.K.; SOSNINA, I.ye.; YELAGINA, N.V.;
SKURATOV, S.M.; Primal ^{uchastiye} LYU TSZIN'-SYAN [Liu Chin-
hsiang] (Koreyskaya Narodnaya Respublika

Heat of formation of spirocyclane hydrocarbons. Dokl. AN
SSSR 155 no. 5:1123-1125 Ap '64. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
Predstavleno akademikom B.A.Kazanskim.

TUROVA-POLYAK, M.B.; SOSNINA, I.Ye.; NGO TKHI TKHUAN; KHOANG CHONG IEM;
DENISOVA, Ye.P.

Use of the oxides of rare earth elements in catalytic synthesis.
Dokl. AN SSSR 157 no.3:643-645 J1 '64. (MIRA 17:7)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
Predstavleno akademikom A.A. Balandinym.

TUROVA-POLYAK, N.B.; KHOANT CHONG IEM; BOSNINA, I.Ye.

Obtaining ketones in the presence of neodymium and erbium oxides.
Neftekhimija 4 no.4:603-608 J1-Ag '64 (MIRA 17:10)

I. Khimicheskiy fakul'tat Moskovskogo gosudarstvennogo universiteta.

L 34530-65 EWG(j)/EWT(m)/EPF(c)/EPR/ENP(j)/ENP(t)/ENP(b) Pc-4/Pr-4/Ps-4
IJP(c) JD/JG/RM

ACCESSION NR: AP4042796

S/0020/64/157/003/0643/0645

AUTHOR: Turova-Polyak, M. B. ; Sosnina, I. Ye. ; Ngo Thi Tkhuon; Khoang Chong Iem; Denisova, Ye. P.

TITLE: The use of rare earth element oxides in catalytic synthesis

SOURCE: AN SSSR. Doklady*, v. 157, no. 3, 1964, 643-645

TOPIC TAGS: rare earth oxide, catalyst, catalytic synthesis, ketone synthesis complex, ester synthesis, olefin synthesis, cycloolefin synthesis, isomerization, oxidation reaction, symmetrical aliphatic ketone, unsymmetrical aliphatic ketone, aliphatic aromatic ketone, cyclopentanone, asbestos carrier, quartz carrier, catalytic activity

ABSTRACT: The use of Er, Pr, La, Ce, Sm and Cy oxides as catalysts in the synthesis of ketones, complex esters, olefins and cycloolefins, and in isomerization and oxidation reactions was investigated. Symmetrical and unsymmetrical aliphatic ketones, aliphatic-aromatic ketones and cyclopentanone were synthesized using Nd, Er, Pr and La oxides on asbestos, quartz and silica gel carriers.
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ACCESSION NR: AP4042796

Essentially the same yield of aliphatic ketones was obtained with asbestos or quartz carriers for Nd, Er or Pr oxides. The yield of ketone increased in the homologous series from acetic to butyric acid; further increase in molecular weight lowered the yield of ketone. Use of acids of the iso-structure greatly reduced the yield of ketone. The yield of dipropylketone prepared on Nd, Pr, Er and La oxides decreased depending on the carrier: quartz asbestos silica gel. The yield of aliphatic-aromatic ketones was generally higher compared to the yield of unsymmetrical aliphatic ketones. The results of the study of the effect of the oxide, carrier, and structure of the alcohol and acid radicals on the yield of complex esters are summarized in the article. Increasing the molecular weight of the alcohol had little effect on the yield of ester for each oxide. Esterification of butyric acid with alcohols with an uneven number of C atoms gave a somewhat higher yield than the even numbered alcohols. Nd and Er, on asbestos and carbon, were the most active catalysts. Praseodymium oxide (abstractor's note: author does not specify which oxide) on quartz proved to be a specific catalyst for the dehydration of cyclohexanol to cyclohexene (475C optimum temperature, 53% yield) which isomerized to methylcyclopentene. Pr₆O₁₁ on quartz promoted

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